

PIPING SCHEMATIC - DAIKIN HEAT/COOL WITH ELITE BACKUP HEAT AND DHW

INDIRECT WATER HEATERS MARK GAL KBTUH RECOV. AT LBS DIM.
CAP IN 65° F RISE FULL HT. X DIA. NOTES MODEL **HEAT TRANSFER** 1722 22 MINUTES 74" X 27" 119 <del>-120.0 -</del>

SSU-119SB

PUMPS

	MARK	GPM	FT HD	MANUF.	MODEL	MOTOR				
						НР	V/PH	AMPS	EFF. (%)	NOTES
	<u>P-1</u>	0-14	0-16	TACO	008-VDTF6	1/25	115/1	0.79	NA	P1-P2
	<u>P-2</u>	12	17	TACO	0014-F1-IFC	1/8	115/1	1.55	NA	P1-P2
	<u>P-3</u>	7	7	TACO	007-F5-IFC	1/25	115/1	0.71	NA	P1-P2

## **PUMPNOTES**

P1. Provide minimum 12 pipe diameters upstream of pump inlet. Provide full port isolation shutoff ball valves or iso-flanges at all pumps. P2. A spring or flow checkvalve shall be installed in place of a an pump integral checkvalve.

SYSTEM	COMPONENT

MARK	COMPONENT	MANUF.	MODEL	NOTES				
A	SUPPLY & RETURN MANIFOLD	ZURN	ACCUFLOW PRE-ASSEMBLED					
В	AIR ELIMINATOR	TACO	VORTECH VRTX 125					
С	BACKFLOW PREVENTER	WILKINS	750-AC-1/2"					
D	PRESS. REDUC/FILL VALVE	TACO	3350					
E	EXPANSION TANK	FLEXCON	HTX 30					
F	MIXING VALVE	HONEYWELL-SPARCO	AMX	12)				
G	TEMP/PRESSURE GUAGE	MILJOCO	PB00804					
H	TEMPERATURE GUAGE	MILJOCO	B259951-2W					
K	THERMOSTAT	TEKMAR	TN4	14)				
L	ZONE VALVE	TACO	ESB VO75C2A					
M	ZONE VALVE CONTROLLER	TACO	ZVC-405					
Р	DHW EXPANSION TANK	FLEXCON	WH-18					
R	MOTORIZED DIVERTING VALVE	DAIKIN	-					
P	DHW EXPANSION TANK	FLEXCON	WH-18	(11)				
R	MOTORIZED DIVERTING VALVE	DAIKIN	-	(11				

- 1. This drawing is conceptual and diagrammatic and does not constitute a complete plan. In staller to supply and install all materials shown on this plan and all others needed to complete this hydronic system. Also, provide any incidental work not shown or specified, which can be reasonable
- in ferred as belonging to the work necessary to provide the complete system. 2. Only qualified Plumbing or Heating technician shall install the heating system.
- 3. Installer of Daiken Equipment shall have factory certification. 4. Refer to all manufactures guidelines pertaining to the installation, protection and maintenance of the hot water source.

- System shall be tested for 30 min. At 100 psi. 6. Verify with local authority having jurisdiction for back flow prevention requirements.
- Provide pressure relief with direct piping to approved location.
- Where applicable, swing check valves shall be mounted in an upright position. Where applicable, provide a minimum of 8 pipe diameters of straight pipe upstream of all spring check valves.
- 10. Condensate removal per UMC and local codes. Optional PH neutralizer or if required by local authorities can be made up of lime crystals, marble or phosphate chips that will neutralize the condensate. Never drain condensate that has not been neutralized to castiron waste piping. Provide condensate punp kit P/N 554200 available from Heat Transfer Products where condensate cannot be drained by gravity with proper slope.
- 11. Recommend optional TACO D'Mand System circulation pump with remote sensor capability. Coordinate with plumbing contractor and size based
- 12. Verify tank size per plumbing design. WH-18 sized for 9.5 acceptance gallons at 140 gallons of system volume (including tank), 150° max temperature and max 20 ft system piping above in let to tank. See flexconind.com for sizing different than these parameters.
- 13. Anti-scald thermostatic mixing valve set to 115° shall be used. Mount mixing valve no higher than 8° above hot water outlet. 14. Thermostats shall be communicating type with a master and slave units.

# PRIMARY/SECONDARY PIPING

- See tubing layout for manifold locations. Unless noted, all branches to manifolds shall be ¾. 16. Secondary piping in a primary/secondary system shall have tees plumbed 4 pipe diameters center to center, and shall have a minimum of 8 pipe
- diameters of straight pipe upstream of firsttee. 17. Where not shown, provide ball valves and hose bibs for isolation and purging of primary and/or secondary piping. Apurging valve may be used as a substitute for a ball valve/hose bib combination.
- 18. Unless practicality does not permit, all secondary piping shall be plumbed such that the risers go down from an overhead primary circuit.

Installer shall obtain authorization from the ownerand design team for "Or Equal" substitutions on heating system components. "Or equal" substitutions constitute components that are of equal quality and work manship to those specified. Where possible components shall be of a single manu facturer and shall have approved ratings of all applicable agencies (UL, IAPMO, ASME, etc.).

### AIR FOR COMBUSTION AND GASLINES See venting sheet for venting requirements

20. All routing of gas line piping shall be based on the Chapter 7 of the 2010 Uniform Plumbing Code and Chapter 13 of the 2010 Uniform Mechanical Code. Pipingshall be new, standard weight wrought iron or steel (exterior-only galvanized or black), with malleable iron fittings. Approved PE (Poly-Ethylene) pipe may be used in exterior buried piping systems.

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